

Enduring capital flow constraints and the 2007-8 financial and euro zone crises

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The fallout of the financial and euro zone crises have brought to the fore much of the insight offered by the respective analytical traditions of comparative and international political economy, particularly when compared to the spectacular failure of the intellectual paradigms in which academic economics remains trapped. The crises have shown the importance of both the relationships within nation-states between contested domestic politics and institutional economic environments and the cross-national consequences of vast international financial markets and economic interdependence. There is also, however, a tension between understanding the crises through analytical approaches that emphasise national economic and political differentiation and those that give primacy to the commonality of the external economic and political environment. If, for example, as some argue, the financial crisis has its origins in the particulars of an overly financialised American economy then the international fallout of the crisis primarily arose from contagion; by contrast, if the crisis was more the product of the global financial structure during the pre-crisis years, then national differences at best explain the extent to which individual economies suffered and the contingencies of states' responses.

In many ways comparative arguments have dominated political economy approaches to both crises. Many political economy scholars have portrayed the financial crisis as Anglo-American origin and argued that those economies that shared Anglo-American characteristics around finance were hit hardest and most directly (Bell and Hindmoor 2015; Hay 2011, 2013; Hall 2013; Gamble 2014). Certainly there are important differences between comparative approaches that stress institutional features of national capitalism and those emphasising the political contingencies of growth models (Hay and Smith 2013). Nonetheless these comparative arguments generally uphold a sharp distinction between the weakness of the Anglo-American style economies and the strength of the German with the French in the middle of the dichotomy. The conclusions drawn from this comparative differentiation have echoed the dominant political narratives in France and Germany since 2008 that have cast blame upon Wall Street and what President Sarkozy repeatedly called the 'Anglo-Saxon model' of capitalism (*Reuters*, 2 April 2009).

Meanwhile, a number of comparative scholars have analysed the euro zone crisis through the varieties of capitalism lens (Hall 2014; Hancké 2013; Johnston, Hancké and Pant 2014). Peter Hall (2014,

1226) for his part has argued that the euro zone ‘crisis has taken a form shaped by national varieties of capitalism’. These comparative arguments have focused attention on the institutional differences between the economies of the northern and southern euro zone member states. This approach to the political geography of the euro zone crisis has again had a political parallel in the rhetorical desire of the German government to blame the crisis on an absence of structural reform in the periphery and the counter response from some periphery governments that the essential problem of the euro zone is the German obsession with procuring a trade surplus.

There is, however, a paradox at work in most comparative political economy approaches to the two crises. These crises have both at their epicentre been banking crises. Whilst a great deal of political effort has gone into denying this reality in the case of the euro zone, the denial, as Mark Blyth (2013) has forcefully argued, does not make it any less true. Yet with some noticeable exceptions (Hardie and Howarth 2013; Bell and Hindmoor 2015) much comparative political economy analysis has eschewed specific analysis of banks during the financial crisis for macro-level accounts of national institutional and political variation (Hardie et al 2013b, 2). Moreover, when banks are put at the centre of the crisis some of the general comparative arguments about specific national dissimilarity falter. In particular the conventional comparative political economy dichotomy generated within the varieties of capitalism literature between the US and the UK as a pair and Germany on the other side with France in a middle position has limited utility in this instance. Rather than US and UK banks showing common weaknesses during the financial crisis, there were significant differences between the experiences of UK and US commercial and universal banks, not least in the crucial matter of dependency on wholesale markets for funding lending (Hardie and Maxfield 2013). Indeed, as this paper will argue, the experiences of UK banks between 2007 and 2009 were more similar to those of German and French banks than they were to US banks. UK, German and French large commercial and universal banks confronted problems during the financial crisis of a different order of magnitude than those faced by their American counterparts. Moreover, these problems arose in significant part because of a distinctive funding issue around access to dollars as a foreign currency that by definition US banks could not have confronted. For the afflicted German and French banks, this dollar problem then continued into the euro zone crisis. Once we recognise the importance of this issue of dollar access for these European banks, analytically pairing any other economies’ banks with those of the US is misleading.

The most penetrating comparative political economy explanations of the financial crisis as a banking crisis are those, like Hardie et al (2013a) and Hardie and Howarth (2013a), that have started from the specifics of the large-scale international changes in banking since the late 1990s. As these scholars have demonstrated, international market-based banking took hold in the pre-crisis years across advanced economies with the singular exception of Japan regardless of the national form of capitalism. Crucially, this internationalised form of banking established new external constraints for banks in their lending and borrowing. This change also occurred in the context in which the consequences of financialisation have transformed systemic risk in international financial markets (Dore 2008; Epstein 2005). In Andrew Baker's (2013, 116) words, 'relatively small unexpected events can generate increasingly costly explosions that no model of political economy can sustain'. Financialised economies are less predictable and more dangerous than their predecessors (Taleb and Blyth 2011), and, as a consequence, contingent, national institutional structures have become less important than they were in explaining the occurrence or absence of crises.

In this context, the privileging of the external environment within international political economy scholarship in principle has clear analytical advantages. Yet as Cohen (2009) has noted few international political economy scholars prior to the crisis in practice concentrated their attention on the systemic destabilising dynamics generated by financialisation and internationalised market-based banking. Neither since the crisis has much attention been paid in international political economy arguments to the issue of the dependency of non-US banks on dollar funding. This is in many ways odd since the internationalisation of banking was part of a significant structural change to the capital side of the international economy during the pre-crisis years and its fallout since the crisis in terms of power relations between states has been politically charged. In part as a result of the internationalisation of banking, the volume of gross international capital flows nearly trebled between 2002 and 2007 (Lane 2013, 7). Although the large global imbalances in current accounts between the US and East Asia also played its part in this rise, and indeed was the focus of political economy scholars (Thompson 2010; Obstfeld and Rogoff 2009) who did stress the destabilising role of capital flows in the financial crisis, more of the pre-crisis rise in international capital flows was the product of cross-border bank flows (Lane and Milesi-Ferretti 2008; Milesi-Ferretti, Strobbe, and Tamirisa 2010). At the centre of these flows stood the large commercial and universal banks of a number of European economies (Bank of International Settlements (BIS) Committee

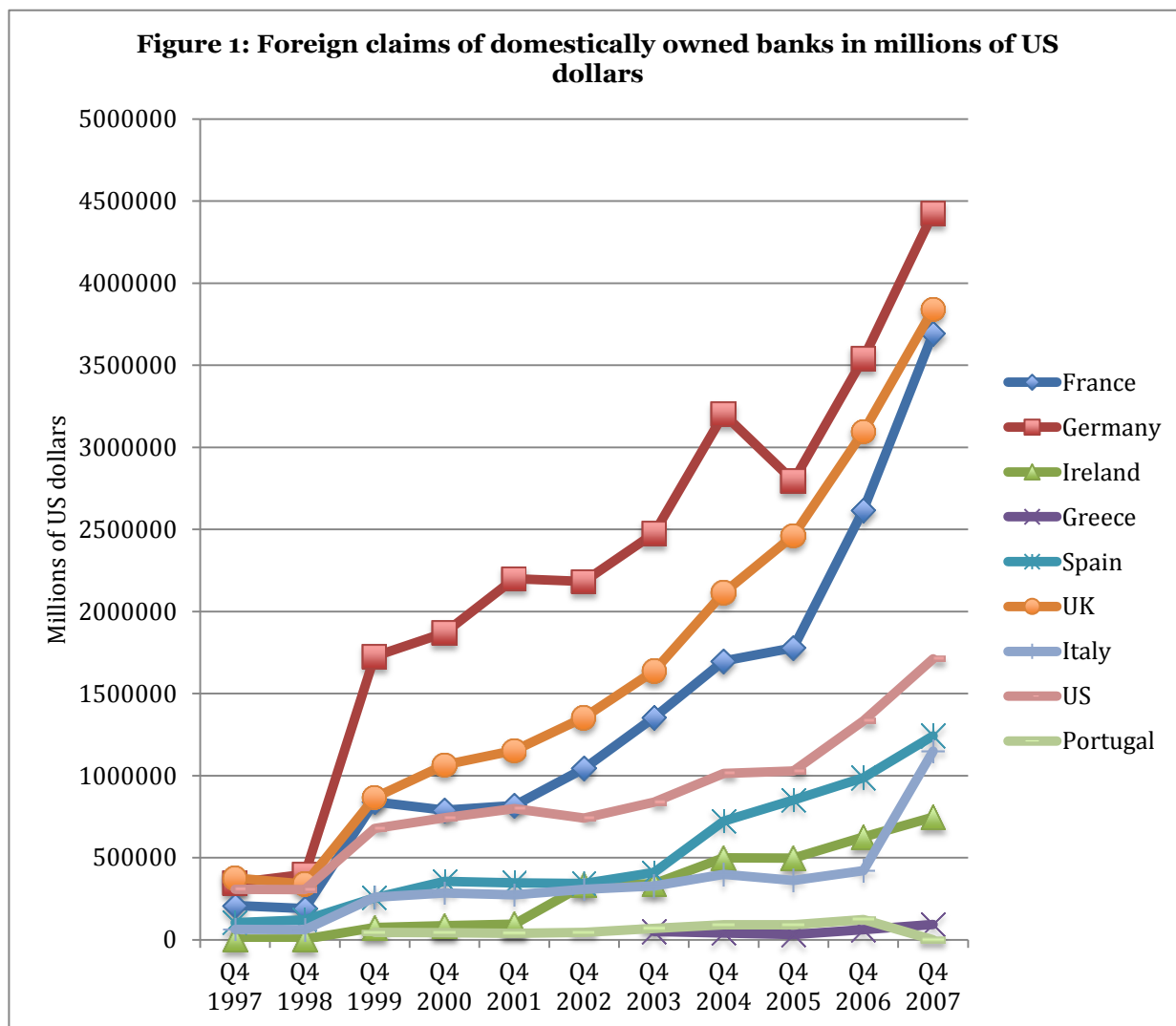
on the Global Financial System 2010, 1) More specifically, the European banks drove a huge volume of capital movements within the euro zone, particularly from the core to the periphery (Lane and Milesi-Ferretti 2008). Indeed gross capital flows at their peak between 2002 and 2007 were far higher within euro zone economies than in any other advanced economy (Lane 2013, 17). These European banks were also the major foreign purchasers of US-issued asset-backed securities and they borrowed heavily in American money markets to fund these purchases (Lane 2012; Noeth and Sengupta 2012, 463). In this context the financial crisis and the euro zone crisis can in some crucial respects be understood as crises of capital flows. Between 2007 and 2012 both French, German, and UK banks on the one hand and the periphery economies on the other suffered acute crises generated by the catastrophic interruption of lines of short-term capital that had flowed steadily during the pre-crisis years. In manifestation the initial crises were different. The French, German and UK banks needed dollar funding and the periphery needed access to credit in a currency it shared with its creditors. But both sets of actors were constrained by market dynamics around international capital flows. Just as significantly, however, the resolution of these crises through these actors' respective access to emergency credit from non-national official institutions revealed much about the power dynamics at work in the present international economy.

Taking the rise of international market-based banking and its accompanying risks as a starting place, this paper analyses the financial crisis and the euro zone crisis as experienced by French, German and UK banks and the periphery states of the euro zone as parallel crises around structural external constraints in relation to capital flows and access to emergency credit. Whilst it reiterates some of the conclusions of Blyth (2013) and Hardie et al (2013a; 2013b), its analytical focus is on international capital flows and the power relations generated by access to emergency credit as separate structural external constraints. Empirically, it shows how at different crisis junctures a number of French, German and UK banks required external rescue by the Federal Reserve Board (FRB) and how a capital flows crisis in the periphery that led to a significant loss of national autonomy for the periphery in relation to the ECB was matched by an external funding crisis for French and German banks that was in autonomy terms much less consequential. Theoretically, it asserts the ongoing importance of the external pathologies around both international capital flows and structural power dynamics around the access to emergency credit that have characterised the international economy since the beginnings of financial liberalisation.

The remainder of the paper is divided into four parts. The first part considers the internationalisation of bank assets. It demonstrates the similarities between French, German and UK banks in contrast to American banks in the risks international assets generated, and shows how French and German banks ran symmetrical risks with their holdings of US asset-backed securities and euro zone periphery bonds. The second section examines the internationalisation of bank funding and explains how the shared dependency of French, German and UK banks on dollar wholesale markets made them endogenously vulnerable to crisis and reliant when crisis came on American financial support. It also explains how for French and German banks the financial and euro zone crises were both funding crises. The third section shows how the sharp rise in inter-bank capital flows across the euro zone created problem for the periphery states. It demonstrates how for the periphery states capital flight recreated through the bond markets a new version of the problem that the Exchange Rate Mechanism (ERM) once caused for weak currency states and how in accessing credit and financial support through the euro zone authorities, including the ECB, the periphery states lost domestic autonomy. The final section draws some conclusions about the importance of structural external constraints in scholarly understanding of the predicaments generated by financialised economies.

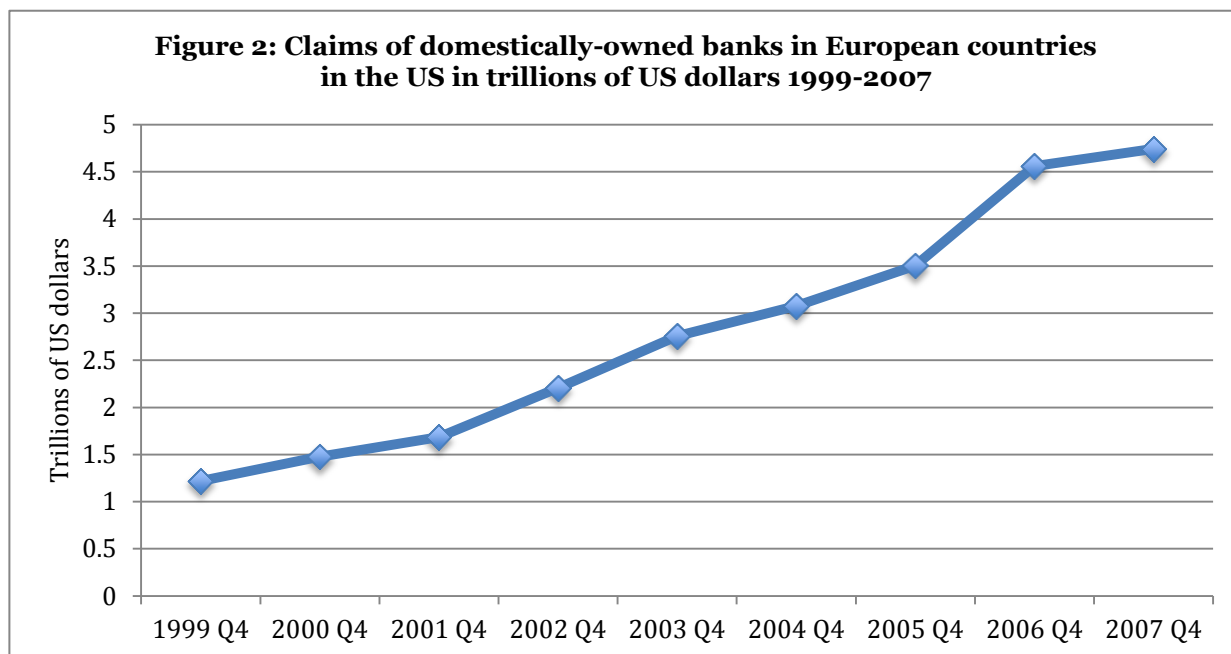
1. The internationalisation of bank assets

From the late 1990s the international assets of banks increased hugely. By mid-2007 total foreign claims of domestically owned banks were rising at almost thirty per cent a year (McGuire and von Peter 2009, 9). As figure 1 shows, the rise of these claims for German, UK and French banks far dwarfed those for American banks and foreign claims were much higher in Germany than for other European banks until 2004. Indeed the drive for international assets had begun first in Germany in 1998 when German banks started to seek higher returns abroad after several years of poor profitability from domestic lending (Hardie and Howarth 2009).



Source: Bank of International Settlements Statistics: International bank claims consolidated – immediate borrower basis

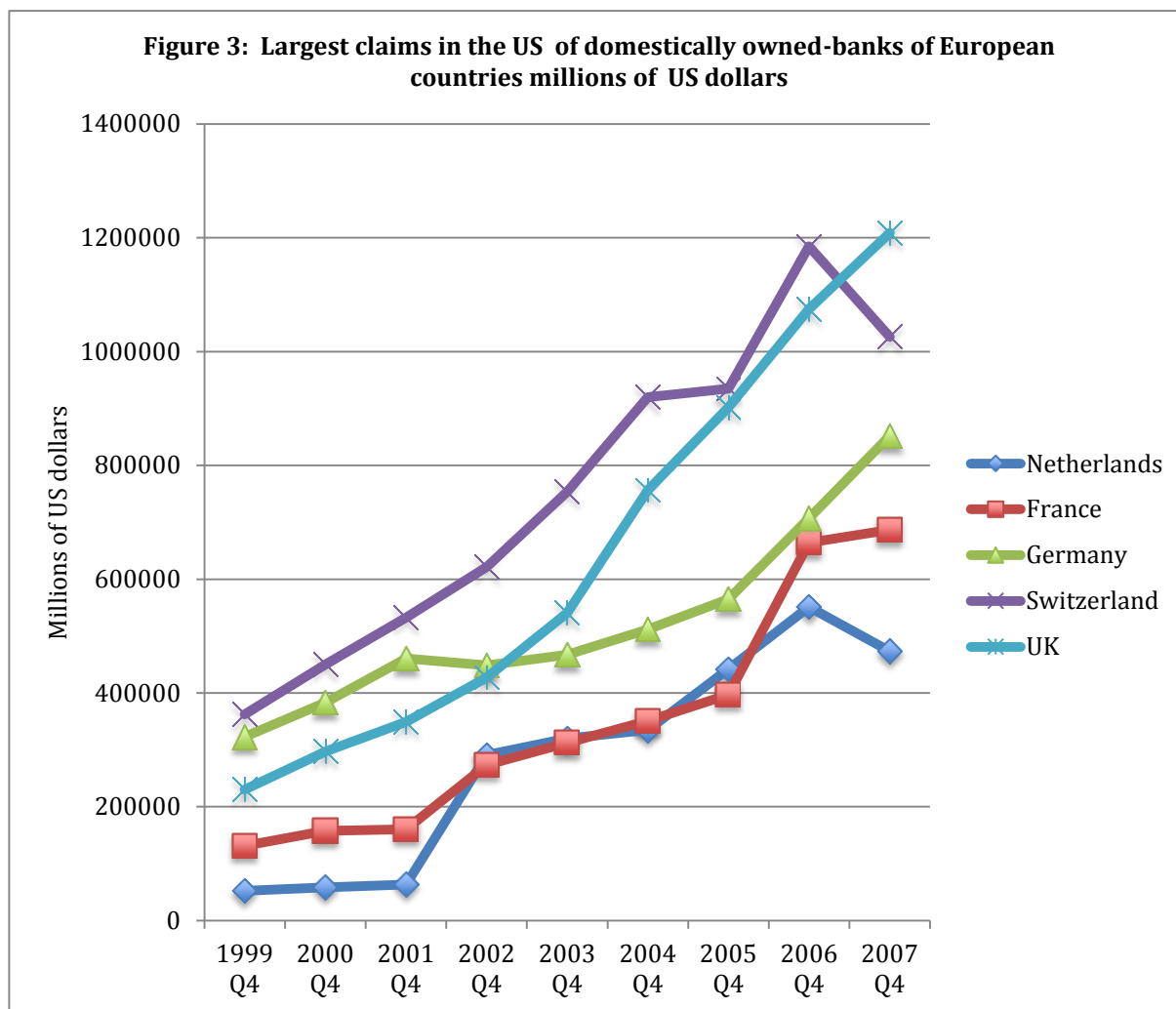
These European banks increased their international assets in significant part through purchases in the US. As figure 2 shows, the claims of European banks in the US rose sharply from 1999 to 2007, reaching nearly \$5 trillion by the end of 2007.



Source: Calculated from Bank of International Settlements Statistics: International bank claims consolidated – immediate borrower basis.¹

The banks with largest claims, as figure 3 shows, were in order of size those in the UK, Switzerland, Germany, France, and the Netherlands.

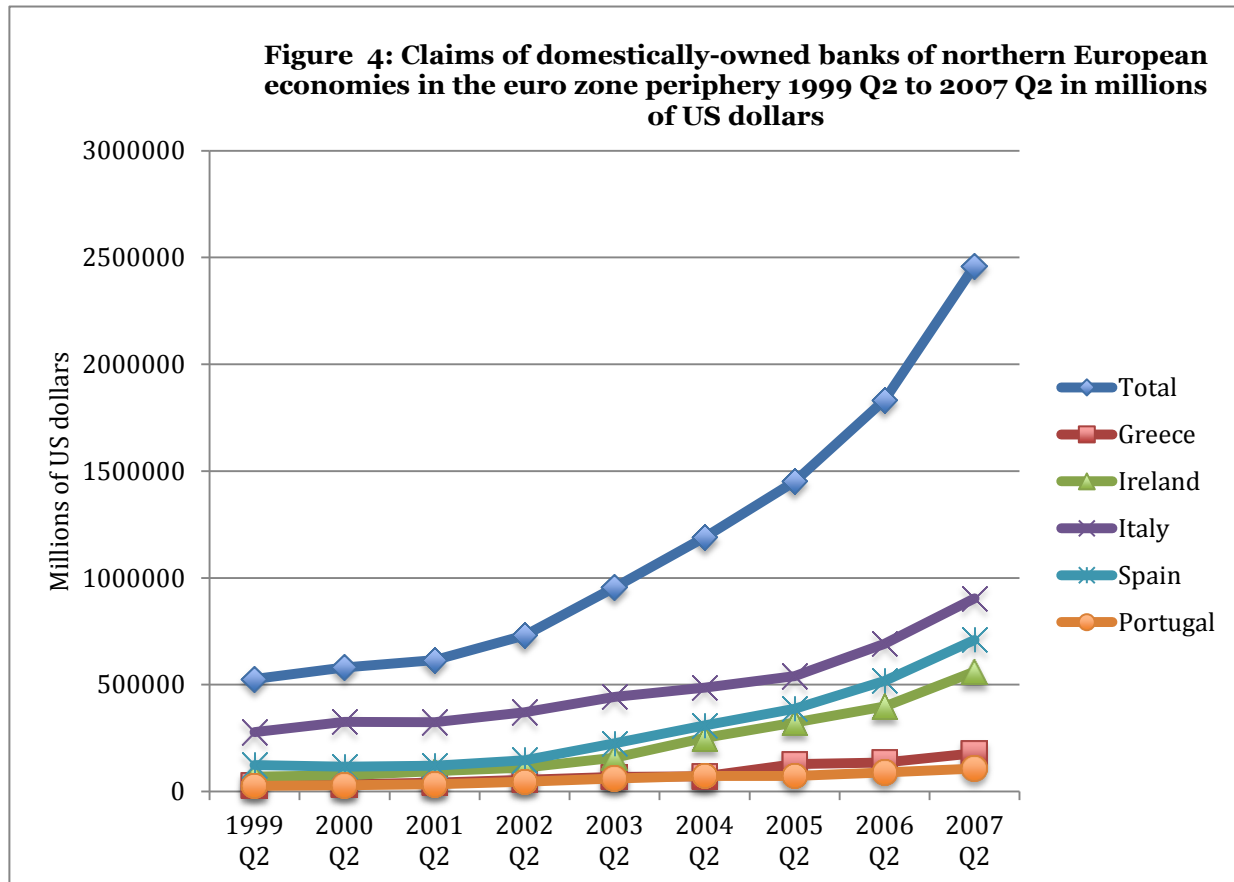
¹ The European countries are Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Netherlands, Portugal, Spain, Sweden, Switzerland and the UK. The totals for 1999 to 2002 does not include Greece, for 1999 to 2004 does not include Ireland, and for 2004 to 2007 does not include Finland as the data is not available.



Source: Bank of International Settlements Statistics: International bank claims consolidated – immediate borrower basis

The composition of these American assets varied by national banking sector. Those German and UK banks with large US assets made a high volume of investment purchases of bonds and securities, not least mortgage-backed securities (MBSs) whilst French banks purchased fewer such assets (Howarth 2012, 377-378). Nonetheless, large universal and commercial banks in the UK, Germany and France all had significant exposure to MBSs. FRB data on its Agency MBS purchase programme initiated in 2008 shows the FRB bought such assets in 2009 and 2010 from Barclays, Royal Bank of Scotland, BNP Paribas, and Deutsche Bank (Board of Governors of the Federal Reserve System 2013).

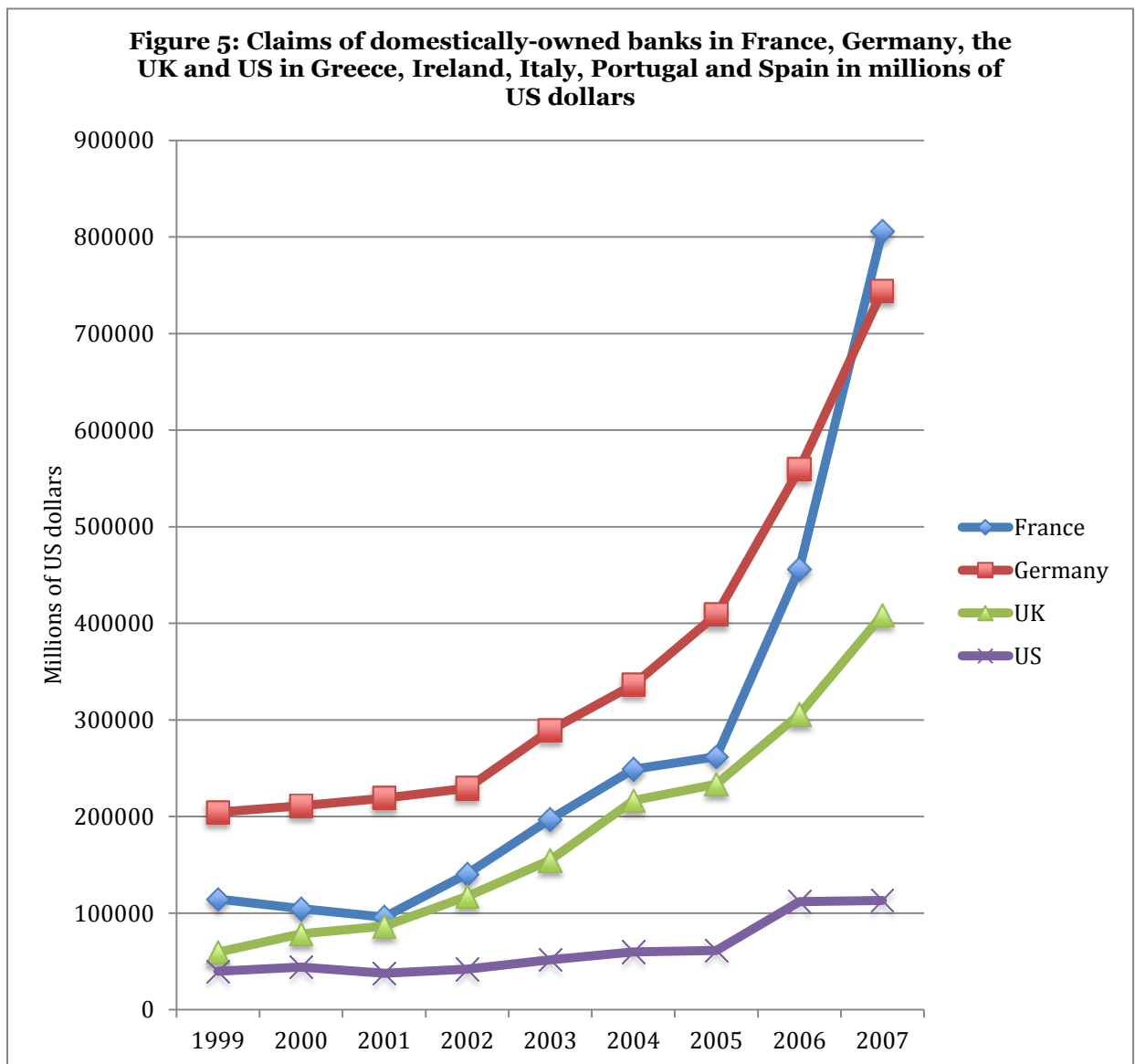
Meanwhile a large volume of capital also flowed from banks in France, Germany, the UK, Belgium, the Netherlands and Switzerland to the euro zone periphery. As figure 4 shows, from 2002 – the year total gross capital flows started to accelerate – the claims of these banks in the euro zone periphery - in particular Italy, Spain and Ireland - rose sharply.



Source: Bank of International Settlements Statistics: International bank claims consolidated – immediate borrower basis.²

Making a comparison between French, German, UK and US banks, French and German banks were, as figure 5 shows, the most exposed with UK banks also more exposed than their US counterparts. By the onset of the Greek crisis in the third quarter of 2009, 55 per cent of the claims of European banks in the periphery belonged to German and French banks and the proportion collectively held by German, French and UK banks was 70 per cent (Calculated from BIS International Banking Statistics).

² The northern European economies are Belgium, France, Germany, Netherlands, Switzerland, and the UK. The data for UK claims on Greece for Q2 2004 is missing.

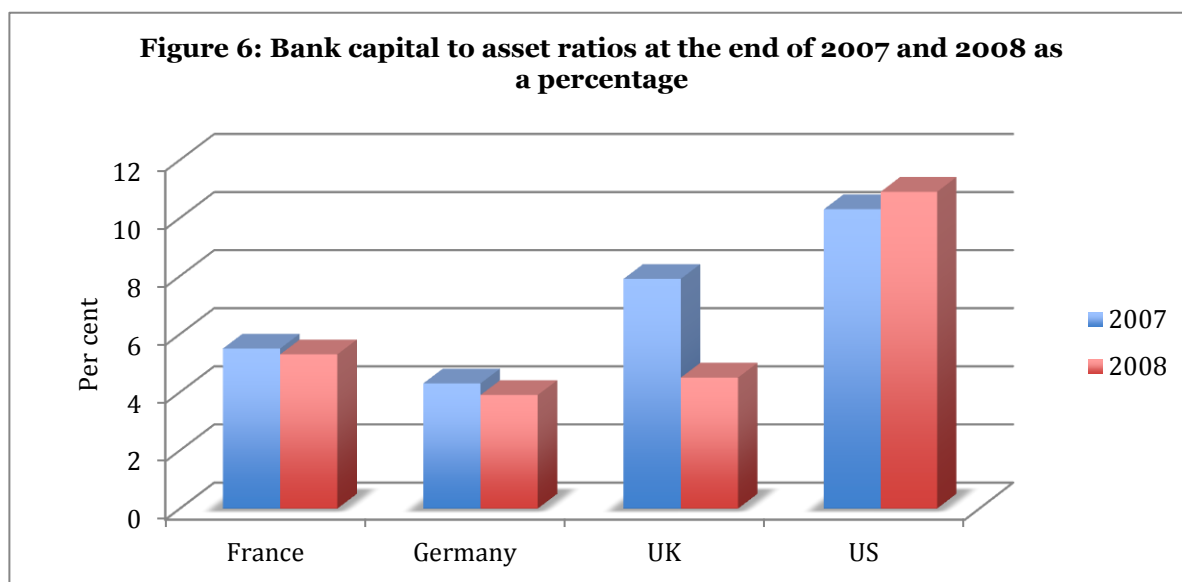


Source: Bank of International Settlements Statistics: International bank claims consolidated – immediate borrower basis.

Seen in this way for French, German and UK banks, the US asset-backed securities and the periphery bonds on the asset side of their balance sheets were symmetrical. In each case the foreign-issued bonds and securities they purchased were systemically mispriced. The MBSs bubble rested on the illusion that national house prices would never fall whilst the periphery bond boom made it appear that lending to the periphery was the same as lending to the German government and that spreads between bonds issued in the two countries would always be marginal. Whether, as Blyth (2013, 64) has argued, the banks buying periphery bonds were engaged in ‘the mother of all moral hazard trades’ or they spectacularly misjudged,

the outcome of their purchases for their balance sheets was the same: any reversal of market perception of the underlying risk would create a massive problem.

The risk created by the nature of the asset purchases was compounded by the size of the assets these banks held. In comparative terms the volume of assets held by banks in a number of European countries were very significantly higher in relation to GDP than it was for US banks. In 2007 the total assets of euro zone banks were equivalent to over 300 per cent of GDP and of UK banks over 500 per cent compared to less than 100 per cent in the US (Shambaugh 2012, 16; Bank of England 2010, 325). This problem was compounded by weak capital requirements. When compared to American banks, French, German and UK banks all had poor capital to assets ratios. As figure 6 shows, banks in these three countries were in a worse position than American banks at the end of 2007, and their position deteriorated in 2008 whilst American banks improved their position.



Source: IMF (2009), 15 and IMF (2010), 23.

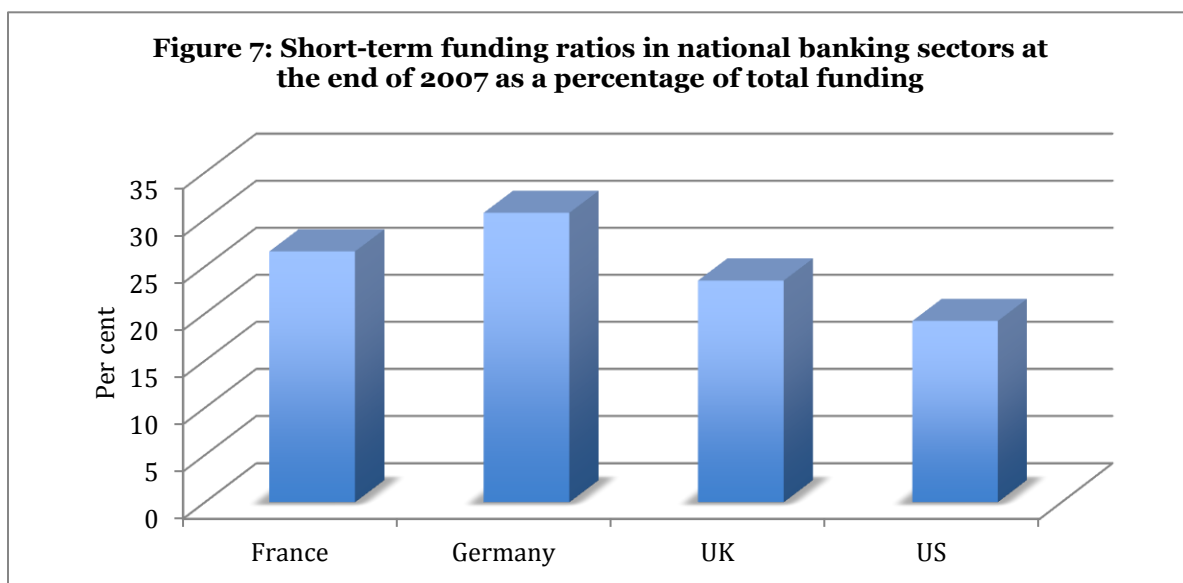
Of course aggregated national ratios can distort a more complicated picture. German banks appear to have been in the worst position of banks in the four countries shown in Figure 6. In part this weakness is explained by the prevalence in Germany of a significant number of co-ops and savings banks with very little core Tier 1 capital. Nonetheless, taking the leverage ratios of the large universal French, German and UK banks, these banks increased their leverage during the pre-crisis years in a way in which their US counterparts did not (Noeth and Sengupta 2012, 464-5). Indeed, among universal banks almost certainly no other bank was as highly leveraged as Deutsche Bank (Coppola 2014).

In sum, by 2007 German, UK and French banks had massively internationalised their assets without adequate capital to support the expansion. With high leverage ratios they held vast international assets many of which both in the US and the euro zone periphery were systematically mispriced in relation to risk. In doing so they were extremely vulnerable to an abrupt change in market sentiment.

2. Internationalised funding and the Federal Reserve Board

In the context of internationalised market-based banking the structural counterpart of banks holding a high volume of US assets was a funding dependency on international dollar money markets. This dependency constituted part of a more general shift from the turn of the century by universal and commercial banks away from funding lending almost entirely through customer deposits towards much greater use of wholesale markets, some of which were very short-term, and also among universal banks to greater use of these markets to fund larger investment asset portfolios. Borrowing in wholesale markets carried inherent risks for any bank or indeed other form of financial corporation (Huang and Ratnovski 2011). Indeed these risks were at the centre of the financial crisis with the most common weakness of financial corporations in deepest crisis in 2007-8 being a disproportionate dependency on short-term funding in wholesale markets (van Rixtel and Gasperini 2013, 5; Beltratti and Stulz 2012; Raddatz 2010). For universal and commercial European banks this dependency came in good part from customer funding gaps of another magnitude to those in place among US banks (IMF 2014, 4; Le Leslé 2012, 6; Carmassi, Gros, and Micossi 2009, 98). In direct comparative terms, as figure 7 shows, German, French and UK banks, were more dependent on short-term funding than their US counterparts. Although there were significant national differences in the specific nature of this dependency, not least in the extent to which

this borrowing supported lending or asset purchases (Hardie and Howarth 2013b, 39-40), this dependency significantly increased these banks' liquidity risk.



Source: IMF (2008), 15.

This general problem was then hugely compounded in consequence by dollar borrowing. To fund large-scale purchases and lending in dollars, these banks needed the capacity either to borrow dollars inter-bank or US money markets or use foreign exchange swap markets to convert liabilities in other currencies into dollars (McGuire and 2009, 50). The scale of this dollar dependency was higher in Germany and the UK than France (Howarth 2012, 382), but the simple fact of it qualitatively distinguished the collective position of banks in these three economies from the American financial corporations that were also reliant wholesale markets. Any dysfunctionality in dollar inter-bank and money markets and foreign exchange swap markets risked leaving these European banks with disastrous problems, especially when there was a mismatch between their longer-dated US assets and their short-term unsecured dollar borrowing (McGuire and von Peter 2009, 2; BIS Committee on the Global Financial System 2010, 2).

When wholesale markets first severely tightened in the summer of 2007 German and UK banks in particular faced significant dollar funding gaps, and this problem intensified a year later (McGuire and

Von Peter 2009, 54). Whatever these European states also did at national level, effective bailouts to prevent European banks collapsing were quite simply dependent on the US acting through the FRB as what McDowell (2012) has termed a ‘sovereign’ international lender of last resort. In its direct emergency lending programmes between December 2007 and 2010, the FRB effectively provided at least as much support to European banks as it did to American corporations. As table 1 shows, when these programmes ended in July 2010, nine of the fifteen largest term-adjusted borrowers, leaving aside intermediary borrowing, were European banks including three belonging to the UK, and two to France and Germany.

Table 1: Largest-term adjusted borrowers from the Federal Reserve Board, December 2007 to July 2010.

	<i>Bank</i>	<i>State</i>
1	Bank of America	US
2	Citigroup	US
3	Royal Bank of Scotland	UK
4	Barclays	UK
5	UBS	Switzerland
6	Deutsche Bank	Germany
7	Wells Fargo	US
8	Dexia	Belgium
9	Credit Suisse	Switzerland
10	Bank of Scotland	UK
11	Commerzbank	Germany
12	Goldman Sachs	US
13	Merrill Lynch	US
14	BNP Paribas	France
15	Société Générale	France

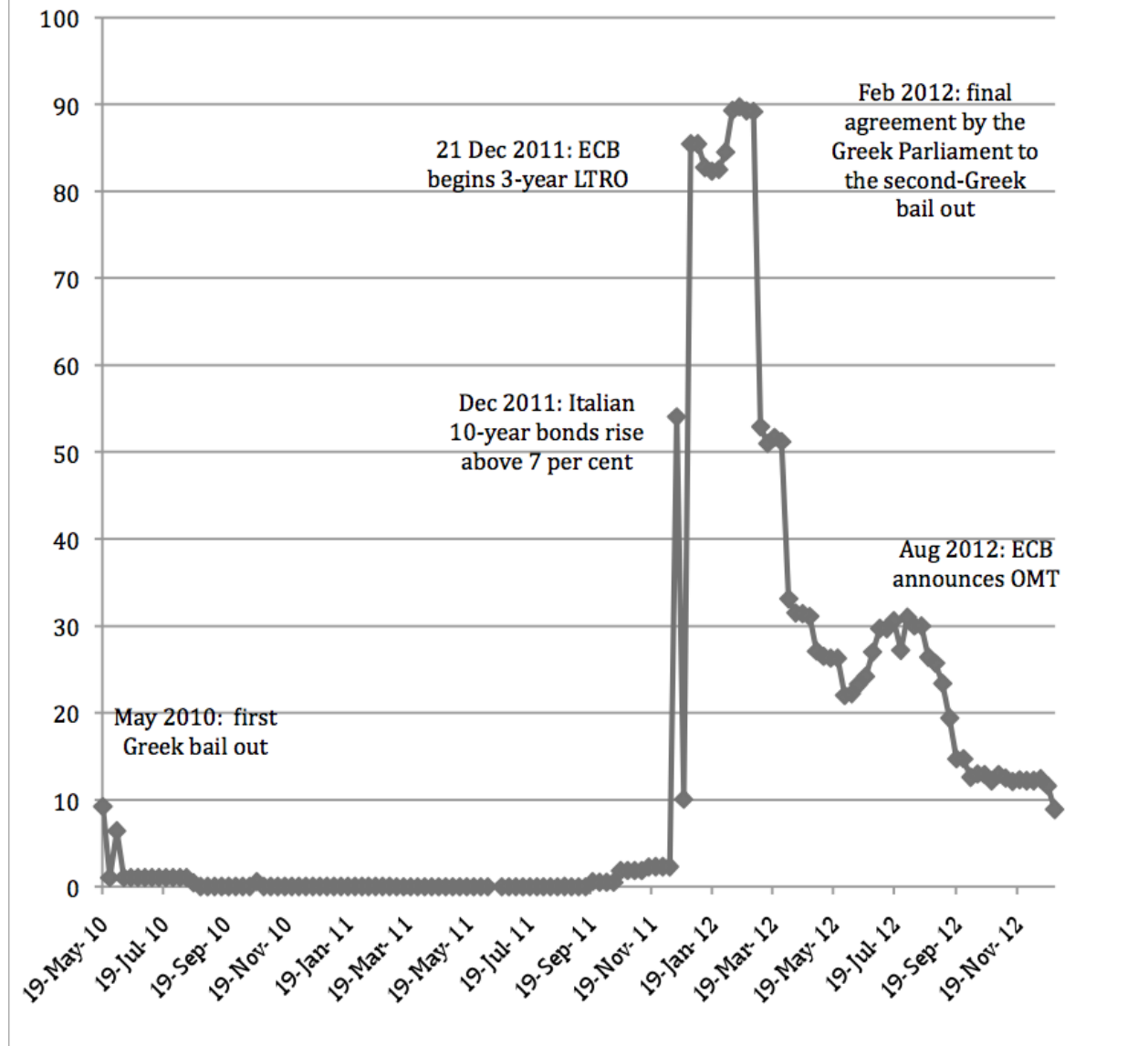
Source: United States Government Accountability Office (2011), 132.

The FRB also provided a direct supply of dollars through foreign exchange swap arrangements. In December 2007, the FRB announced a new line of swaps with the Bank of England, the ECB and the Swiss National Bank to close the dollar gap. In September 2008, after Lehman Brothers' bankruptcy, the FRB doubled the size of the swaps available. One month later, it announced that its swap arrangements with these three central banks would be increased to accommodate in its words 'whatever quantity of US dollar funding is required' (Quoted in Baba, McCauley, and Ramaswamy 2009, 76).

This swap facility was reactivated by the FRB in May 2010 and ran through to August 2012 (McGuire and von Peter 2012, 59). During this period the Bank of England drew no dollars (Federal Reserve Board of New York 2015), in part a consequence of UK banks reducing their general reliance on wholesale funding after 2008, with the customer funding gap falling by more than seventy per cent between 2008 and 2012 (Bank of England 2012, 19-20). By contrast, at the moments of most acute crisis within the euro zone from 2010 to the summer of 2012, the ECB made significant use of the facility.

Strikingly, each crisis in the periphery in this period had a parallel crisis in the core produced by the problems generated by the need of various banks in those economies for dollar funding in the wake of the absence of funds from American money markets. During this period the more problematic the periphery assets held by French and German banks appeared the less able French and German banks were to borrow in American money markets. Since the bulk of the collective periphery assets of the French and German banks lay in Italy and Spain - with around 60 per cent of German exposure to the periphery being in these two countries and around 80 per cent of French exposure (Calculated from BIS International Banking Statistics) - these banks risked an immediate dollar funding crisis at any point when the pressures in Italian and Spanish bonds markets were particularly acute.

Figure 8: Outstanding value of dollar swaps held by the ECB in billions of dollars from May 2010-November 2012



Source: Federal Reserve Bank of New York (2014).

Taking the weekly data series published since May 2010 by the Federal Reserve Bank of New York (2014) on Foreign Exchange Swap Agreements, figure 8 shows that the volume lent by the Federal Reserve Board to the ECB rose and fell in relation to the development of the euro zone crisis from mid 2010 to 2012. In the second week of May 2010, as the first Greek bailout was finalised and the ECB's Securities Market Programme (SMP) agreed, the outstanding swap to the ECB stood at \$9.2 billion. Although there was some small-scale borrowing around the time of the Irish bailout in November 2010, by the second week of March 2011, the ECB had largely cleared the swap. In the autumn of 2011, the ECB then began drawing dollars again as acute pressure mounted in the Spanish and, particularly, Italian sovereign bond markets despite the ECB's large-scale purchases of Italian government bonds under the SMP. The volume of the outstanding swap reached another peak around the peak when the ECB unfolded a new Long Term Refinancing Operation (LTRO) through which periphery banks were able to bid for three-year euro funding. Whilst the initial implementation of LTRO led to an immediate reduction in demand for dollars from the FRB, continuing uncertainty in the negotiations of the second Greek bailout produced a further peak. Then after some months of relative calm, the renewal of bond market pressure on Spain produced a smaller surge in demand for dollars that was then diminished after the ECB's announcement of intent on OMT to back Mario Draghi's declaration in late July 2012 that the ECB was 'ready to do whatever it takes' to save the single currency (Quoted in *Financial Times*, 26 July 2013).

Whilst the ECB does not publish data on the recipients of swap funding, by definition the banks taking dollars must have been those with the greatest dollar requirements, which in practice meant those most dependent on American money market funds. Looking at the same period of the euro zone from this end, these money funds clearly reduced their exposure to European banks as the euro zone crisis took off in 2010. Moreover, in the second half of 2011, when the size of the swaps rose very sharply, these money funds withdrew money from European banks (Fender and McGuire 2010, 13-14; Fitch Ratings 2011; IMF 2012, 26-29). Between May and October 2011 US money fund dollar exposure fell to France by 69 per cent, to Germany by 50 per cent, to the UK by 25 per cent whilst it increased to US Treasury and Agencies by 55 per cent and to Japan by 38 per cent (Fitch Ratings 2011). Although these money funds did not return after the summer of 2012 to providing as much finance as they had prior to 2010, they did re-open to European banks, once the ECB had acted to convince these investors that the risk in exposure to European banks was manageable (*Financial Times*, 22 September 2013).

In sum, French and German banks confronted external funding crises, akin to those they had experienced with UK banks in 2007 and 2008, at intervals that corresponded strongly with the junctures when the euro zone crisis was at its most intense. Whilst these junctures were portrayed, not least in Germany, as crises for the periphery they were no less potential crises for France and Germany. As the IMF (2012, 77) later noted, in the autumn of 2011 ‘a full-blown bank crisis was in the making’. The consequences of such a crisis, in the IMF’s judgement, would have ‘exceeded those experienced in the aftermath of the Lehman bankruptcy in 2008, threatening to bring capital markets and the international banking system to a halt and raising the spectre of a global economic downturn’. The actions that prevented such an escalation were structurally the same. In both cases the host states of the exposed banks acted to provide financial support in the local currency, whether by recapitalisation in the case of the financial crisis or through loans to the periphery and the ECB’s purchasing and lending programmes in the case of the euro zone crisis, and the FRB met the crucial requirement for dollars that American money markets refused to meet.

4. The euro zone periphery, the bond markets, and the ECB

If in the wake of the internationalisation of banking during the pre-crisis years various German, French and UK banks had made themselves externally dependent on dollar funding, the periphery economies in the euro zone became reliant on cheap external credit from these same banks. The ability of periphery economic and political actors to access this capital stood in sharp contrast to the external financial conditions they had faced before the introduction of the euro. Under conditions of open short-term capital flows, periphery economies with currencies perceived as inflationary and with weak current accounts had since the 1970s operated under an acute external monetary constraint. Membership of the ERM created an institutionalised and permanent disjuncture between the lower interest rates available to Germany and those endured in the periphery. Under the ERM, the only way for member-states to push interest rates to a level closer to those prevailing in Germany was to make their macro-economic policy stances as much like Germany’s as possible. For the periphery states this task had proved impossible and a succession of devaluations ensued that reinforced the interest rate differential. To compound the problem, from the late 1970s to the middle of the 1990s the US and Germany generally ran monetary policies that produced

historically high long-term nominal interest rates. The cumulative consequences of this external monetary constraint on the periphery can be seen clearly in the predicament of Italy in 1991, the year the Maastricht Treaty was agreed: with state debt already standing at 92.5 per cent of GDP, Italy's average long-term interest rate yield was 12.5 per cent, which was four per cent higher than the rate for Germany (Swanson 2008).

In its fundamental design the creation of the euro abolished this particular external constraint for the periphery by abolishing national monetary policy. If there was only one monetary policy set by the ECB, then all members of the euro zone could benefit from the same level of interest rates. In practice, the initial consequence of monetary union was indeed the convergence of long-term nominal interest rates between Germany and other euro zone members. Even Greece, as the last periphery member to join the euro, enjoyed a reduction on interest-rate spreads with Germany on ten-year government bonds from around 1100 basis points in 1998 to a range between 10 and 30 between 2002 and the end of 2007 (Gibson, Hall, and Tavlas 2012). To accentuate the benefit for the periphery, this convergence took place against a backdrop of very low interest rates in the US sustained by the new flow of capital from East Asia across the Pacific, which allowed the ECB to set its interest rates during the pre-crisis years at lower levels than the Bundesbank had done in the 1980s and 1990s.

Well before the euro zone crisis began, the fall out of the financial crisis began to reverse this benign external monetary environment for the periphery. From the Bear Stearns crisis in March 2008, market perceptions of budget deficits and state debt relative to Germany produced higher long-term sovereign bond yields (Attinasi, Checherita, and Nickel 2009, 5). For Greece the spread rose from around 30 basis points in early 2008 to around 300 in March 2009 (Attinasi, Checherita, and Nickel 2009, 5; Gibson, Hall, and Tavlas 2011, 10). Capital that had flowed from the core of the euro zone to the periphery now moved back (Merler and Pisani-Ferry 2012). By May 2010, when the euro zone states agreed their first collective response to the crisis, these flows were through bond markets already generating the same structural problem for many members, including some outside the periphery, that the ERM had via the foreign exchange markets. In a clear echo of the ERM years, the French Prime Minister, François Fillon, said in June 2010: 'The first thing I look at every morning is the spread differential between France and Germany' (Quoted in Proissl 2010, 10). For the periphery of the euro zone permanent fear of a capital flows crisis had returned, this time one that shut sovereigns and banks out of bond markets. In the cases of Greece,

Ireland, and Portugal such a funding crisis arrived, requiring each of the three states to turn to the euro zone authorities and the IMF for loans that came, not least because of the position adopted by the German government, with strict fiscal conditionality and demands for structural and budgetary reform. In the cases of Spain and Italy, a full-scale crisis was avoided only by the ECB's intervention through its SMP and LTRO. Support by the ECB through this route for Italy came with an explicit timetable from the ECB for the Italian government to pass new legislation, which led when Silvio Berlusconi refused to comply with its demand on pensions to his exit from office (Thompson 2013, 11-12). In this light, the consequence of a capital flows crisis for the periphery has been a new institutionalised external constraint created not only by new euro zone rules insisted upon by most powerful euro zone members (Donnelly, 2014). but the establishment of the ECB as a *de facto* yet conditional lender of last resort.

Even since bond market pressures very significantly lessened for Spain and Italy in the last quarter of 2012, an external financial problem remains across the periphery. Under conditions of capital flight, the periphery economies were unable to cover their imports (Jones 2013, 165). Accordingly the real-time financial imbalances produced by capital flight from the periphery to Germany have been managed through Target2, the euro zone's inter-bank payment system. Whilst the eventual consequences of Target2 are much contested, not least in Germany, in practice it is a mechanism that allows periphery central banks to borrow from the Bundesbank to pay for imports. Put differently, it has become an official mechanism for dealing with the absence of privately generated capital flows.

In sum, the fallout of the rapid increase in capital flows across the euro zone generated by French and German banks in particular eventually created an external funding crisis for the periphery economies with a clear parallel to the monetary dynamics that prevailed within the ERM under the fear of capital flight. The once structural incentive for periphery states to follow German monetary policy to try to maintain confidence in the foreign exchange markets became the imperative to achieve credibility in the bond markets through fiscal adjustment. This external structural weakness and the accompanying loss of policy autonomy generated by international markets was then intensified by the economic and political requirements of procuring emergency financial support through direct loans from the euro zone authorities and the IMF and the ECB's new programmes.

4. Conclusions

The experiences of German, UK and French banks during the financial and euro zone crisis cast considerable empirical doubt on political economy arguments premised on the importance of variation between an Anglo-American model to finance and the comparative strength of a very different German approach. Large commercial and universal German, French and UK banks were in the international structure of both sides of their balance sheets vulnerable to a particular kind of crisis that comparable American banks were not. Risky international assets allied to a funding dependency on wholesale markets and dollar money markets in particular created huge external risks that transcended the conventional comparative political economy categorisations of advanced economies. Whilst for UK banks the problem existed primarily between 2007 and 2009, for the exposed French and German banks the difficulty continued into the euro zone crisis especially in late 2011 and early 2012. During the pre-crisis years these banks purchased large volumes of systemically mispriced international assets in both the US and the periphery that left them extremely vulnerable to a lethal dollar-funding crisis when confidence in their balance sheets deteriorated. In this context, there is no necessary reason why for these banks the two crises had to develop in the sequence they did. A collapse of confidence in the periphery bond market sentiment could have occurred before the crash of the MBSs market and in doing so acted as the first trigger of a dollar wholesale market crisis. In this sense the euro zone crisis was as much a crisis for French and German banks as the periphery. For the periphery itself the consequences of cross-border banks flows eventually created a new and sharper version of the pre-monetary union structural constraints at work in the ERM. The crisis of the periphery since late 2009 at has been at its centre a crisis of capital flight, which in its fallout has produced acute, immediate constraints on domestic economic and political autonomy through the conditional terms of access to emergency credit.

We can understand the nature of these two sets of capital flows problems and the power dynamics then created by the need for emergency credit through the lens of the succession of banking and debt crises that have occurred around the world since financial liberalisation. At four sequential junctures in the summer of 2007, the autumn of 2008, late 2011 and early 2012, and the summer of 2012 various European banks faced a dollar-funding crisis precipitated by a balance sheet requirement for ongoing short-term flows of the American currency. In the same way that several Latin American states in the 1980s and 1990s and east Asian corporations in the late 1990s suddenly found they had insufficient dollars roll over debt, these European banks confronted scarce access to dollar funding. What started off

as bank funding crises then became a foreign exchange crisis for their host states given the political impossibility of governments letting the banks fall or the practical one of providing dollars directly. Again there is a clear parallel with the earlier financial crises in Latin America and East Asia. The differences were of manifestation and remedy, not the underlying problem of dollar scarcity. At the point of crisis there had to be a dollar lender of last resort and this time it was the American central bank rather than the IMF that fulfilled the role in a much less demanding manner for the recipient states. Easy access to that lender required these states to enjoy the political support of the US government, as a succession of emerging-market economy states discovered in reverse when the FRB refused their requests for dollar swaps in October 2008 (Steil 2014, 56). For the periphery economies, their need for official credit looked more overtly like the kind of debt crises previously endured by developing-country states albeit without an exchange rate crisis. In securing financial support they had to subordinate themselves to the demands of both the governments of the core states led by Germany and the ECB. This loss of autonomy occurred even whilst the ECB was also acting through its swap arrangements with the FRB to provide financial support to German and French banks without policy conditionality and indirectly through its SMP and LTRO to lessen the market funding pressure.

To conclude, since the beginning of financial liberalisation short-term international capital flows have generated sharp external constraints on domestic economic and political actors through the risk of capital flight. In parallel to these international market constraints, the distribution of international monetary power privileged the United States in relation to all other states, and Germany in relation to the rest of Europe even within the context of the euro. The fallout of the financial crisis and the euro zone crisis have intensified these long-standing problems and created new roles for the FRB and the ECB with important consequences for the distribution of power between states within the international economy and the policy-making autonomy of the periphery members of the euro zone. Understanding the ongoing problems created by the destabilising nature of international capital flows over any substantial period of time and the power dynamics around access to emergency credit should be central to the ongoing political economy interrogation of the political future of financialised economies.

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